


DoD Transportations Systems Workshop

Contractors Roundtable

Overview of Costello Industries

Why CPR

Discussion topics for Panel and audience

March 29th, 2003

Costello Industries
800-822-2644
www.costelloindustries.com

The History of Costello Industries
A Pioneer in Pavement Maintenance
Costello Industries of Newington, CT,
founded originally as a road building
company more than half a
century ago, began
diversifying its activities
into pavement maintenance
long before many in the
industry had even heard
of the concept.



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President



It was 1969, when most contractors were still focused on cutting and clearing trees and using pan scrapers to move huge quantities of earth for new roads that Frank started positioning Costello into the Pavement Maintenance market. Frank knew those days were numbered, however. There would come a time when new road construction would become scarce, and federal, state and municipal governments would begin thinking about preserving the huge investments they had made in road structures.

March 29th, 2003

Costello Industries
800-822-2644
www.costelloindustries.com

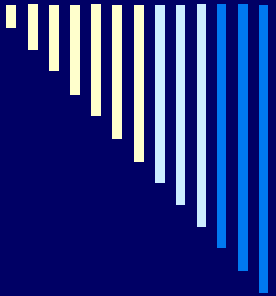


In the early '70s, Costello Industries became one of the first New England firms to apply slurry seal to prolong the life of existing asphalt pavements. In the northeast, it also pioneered the use of milling machines, now a common sight on pavement projects. Other innovations spearheaded by Costello including repairing joints in roads and bridges, installing bridge deck waterproof membranes, applying microseal, sawing and sealing pavement overlays, and applying various type of geotextiles that prevent cracks in substrate from reflecting up through asphalt overlays.

March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

- 
- As the company built on its knowledge and expertise in this new area, the emphasis of its work began to shift from road building to pavement maintenance, recycling and repair. And its territory expanded. A new office was established in the mid 1980's in Jacksonville, FL, it has since been relocated to Atlanta, GA and has grown so significantly that its work volume today equals or exceeds that of the NE Newington, CT office.



- 
- Today Costello Industries employs over 100 people and is a pre-qualified contractor in 36 states. Costello is committed to provide quality, value and service to all our customers.



Concrete Lane Removal on I75

March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

- 
- **Costello has also developed a special interest in airport pavement rehabilitation and has been innovative in bringing special products and services to serve the highly technical and safety conscious airport pavement sector.**



Costello has performed many projects for the Air Force, Navy, Army, NASA, state owned and municipally owned airports.

Joint sealing on 9R at Atlanta

March 23, 2004
DOD Transportation
Systems

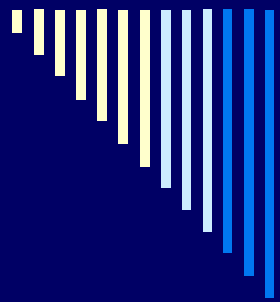
Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

Some of Costello's Repair Methods

- Asphalt Joint and Crack Sealing:
- Concrete Pavement Rehabilitation (CPR)
- Bridge Joint Installation:
- Asphalt and Concrete Milling:
- Full Depth Reclamation:
- Geotextile Fabric Installation:
- Bridge Deck Membranes:
- Rumble Strip Installation:
- Bituminous Concrete Pavement Repair:

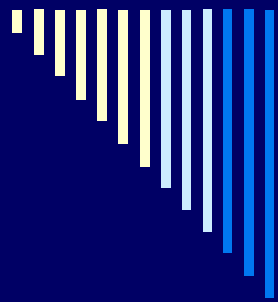




Why CPR?

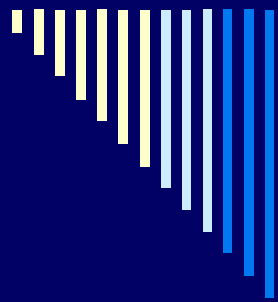
- First level of response for deteriorating concrete pavements should always be CPR
 - Least cost
 - Best return on investment
 - Least service disruption





Purpose of CPR Techniques

- Repair particular distress
- Prevent recurrence of distress
- Improve pavement capacity
 - Structure
 - Traffic
 - Ride



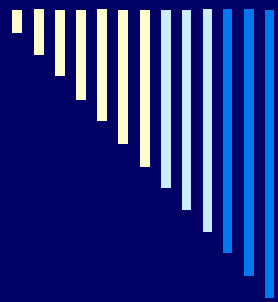
Quality CPR

Specification Details
+ Construction Details
+ Partnering

March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

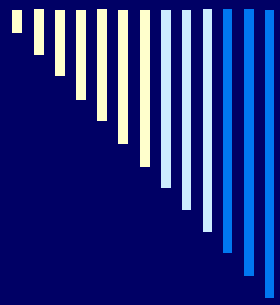
Frank Costello CEO/President
Rick Brockman SE Div President



CPR Techniques

“Mixes of Fixes”

- ❑ Slab Stabilization
- ❑ Full-Depth Patching
- ❑ Partial-Depth Patching
- ❑ Retrofitting Dowel Bars
- ❑ Diamond Grinding
- ❑ Resealing Pavement Joints (& Cracks)



CONSTRUCTION ISSUES

for discussion during design,
prebid and throughout the
project.

- ☐ Fast Track Construction
- ☐ Selection of materials for Full Depth and
Partial - Depth Repair
- ☐ Partial-Depth Patching
- ☐ Joint Resealing
- ☐ Dust Control

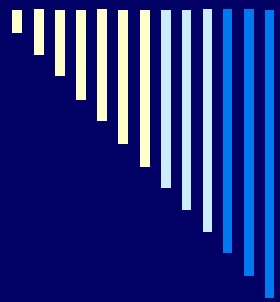
Fast Track Construction

**Why do we need to
talk about Fast
Track
Construction?**

- Owner's Perspective

- Reduce Project Cost
- Reduce User Cost





Fast Track Construction

Why do we need to talk about Fast Track Construction?

- Contractor's Perspective

Increase Safety

Increase Productivity

Greater Control of project



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

Contractor's are a strange breed

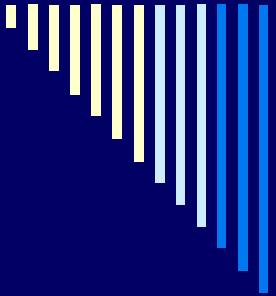
- ☐ Get In
- ☐ Get Out
- ☐ Stay Out!



March 23, 2004
DOD Transportation
Systems

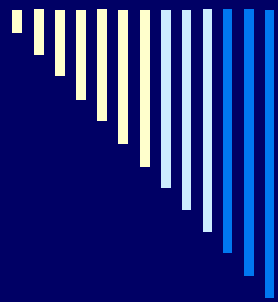
Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President



How to select the correct type
of repair material for each
of the various work types.

GOOD QUESTION?



However, I can tell you where I
start

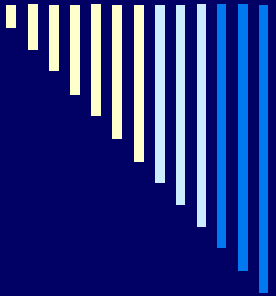
The local Concrete Inspection Firm

The local Material Suppliers

**A Engineer or Designer that has
worked at that base previously.**

Any records of work done in the area

Onsite personnel



The Navy has a Special Publication that even addresses this issue

That quality CPR will “require a team effort to assess the concrete’s condition, identify appropriate repair methodsinclude a concrete inspector, engineer, architect, material manufacturer, contractor and various other concrete specialists.” SP-2085-SHR



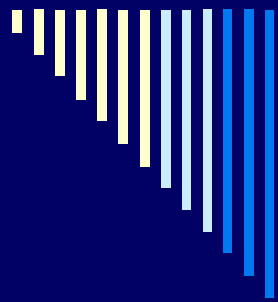
Yes, we Contractors are
available prior to bid to answer
any questions you might have.

**This includes our Technical Organizations
like the ACPA**

Jim Lafrenz or Steve Waalkes

**This includes our manufacturers or
suppliers**

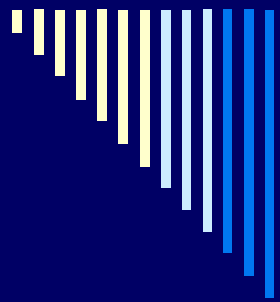
DOW Doug Kempf



Partial-Depth Patching

This in my opinion is the hardest of all the CPR work types to correctly be done on each project

Because it requires more communication between the project's team members than any other work type



Partial-Depth Patching

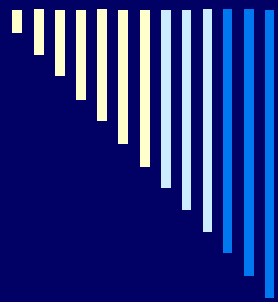
Misuse of technique
Inadequate patch material
Careless installation

No communication

Open Communication

**BAD
PERFORMANCE**

**GOOD
PERFORMANCE**



Defining Repair Boundaries

- Minimum length 300 mm (11.8 inches)
- Minimum width 100 mm (3.9 inches)
- Go beyond problem by 75-100 mm
- Combine close patches (<0.6 m)
- Repair entire joint if more than 2 patches

Defining Repair Boundaries



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

Defining Repair Boundaries



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

Defining Repair Boundaries



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

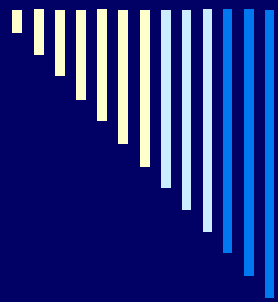
Defining Repair Boundaries



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President



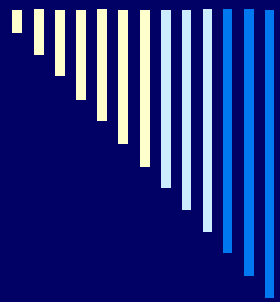
Joint Insert

- ❑ Separates patch from adjacent lane
- ❑ Reforms joint reservoir
- ❑ Provides uniform sealing reservoir
- ❑ Acceptable materials:
 - Styrofoam
 - Asphalt-impregnated fiberboard
 - Fiberboard

Applying Bonding Agent

- ❑ Check patch area cleanliness first
- ❑ Clean again if necessary
- ❑ Apply agent uniformly
 - Scrub cementitious grout with wire brush
 - Apply epoxy with soft brush
 - Coat all surfaces (horizontal & vertical)



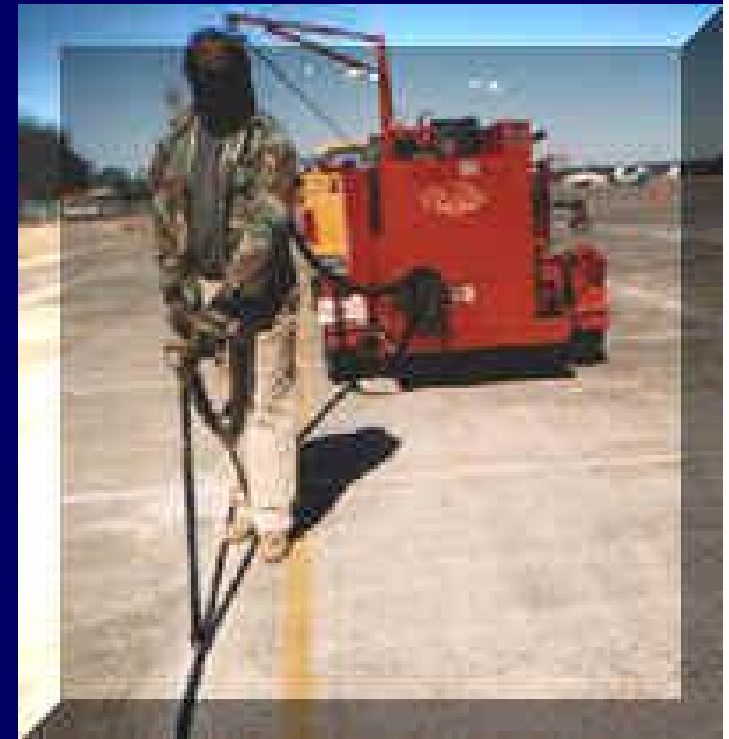


Critical Factors in Sawing and Sealing

Proper Shaping of Joint Reservoir

Proper Joint Preparation

Inspecting Your Own Work



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

Shaping Reservoir

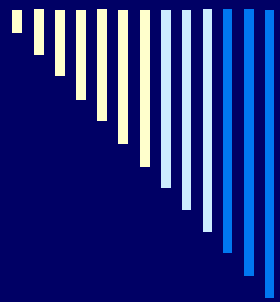
- ❑ After removing old sealant
- ❑ Widen as necessary
- ❑ Deepen as necessary to meet manufacturers and specifications standards
- ❑ Dislodges all old material



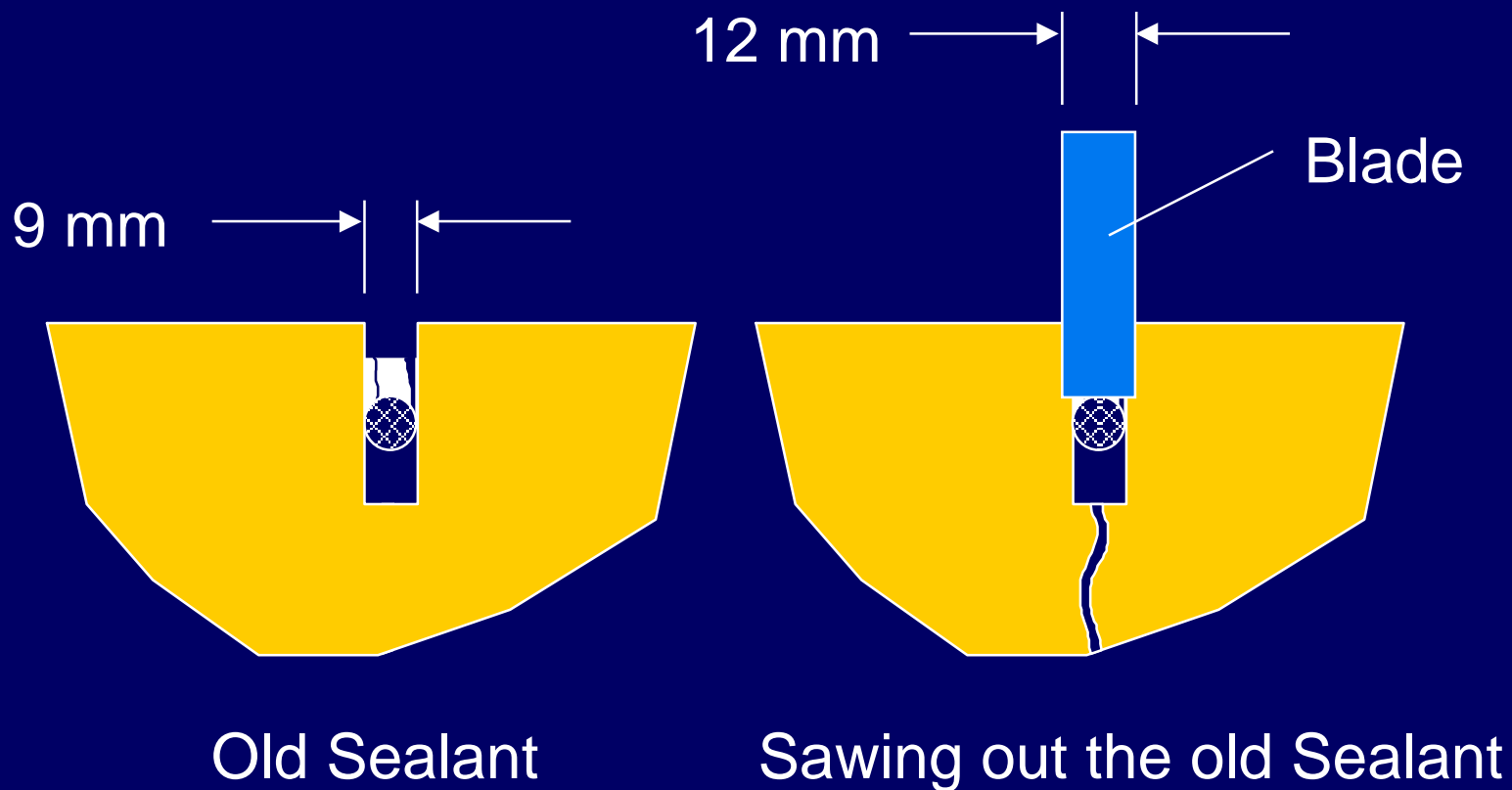
March 23, 2004
DOD Transportation
Systems

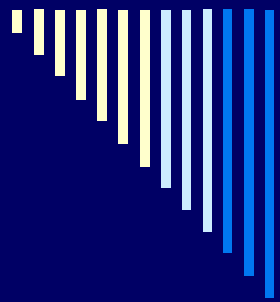
Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President



Blade for Slight Widening





Critical Factors in Sawing and Sealing

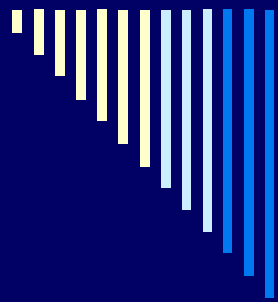
- ❑ Proper shaping of reservoir
- ❑ Joint preparation
- ❑ Inspection of own work.
- ❑ Correct placement of backer rod
- ❑ Inspection of own work.
- ❑ Placement of correct bead
- ❑ Inspection of own work



Sealing Warranties

- 5 Year is at several major airports
 - Atlanta
 - Memphis
- 7 Year and 10 Year have been on used on DOT work





Dust Control

- ❑ DO NOT LEAVE THIS UP TO THE CONTRACTOR'S DISCRETION
- ❑ ESPECIALLY ON SMALLER PROJECTS IN A COMPETITIVE BID SITUATION!!

Dust Control



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

Dust Control



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President

What type of sweeper or vacuum

A Tymco 600 or its Equivalent?

A Tymco 650?

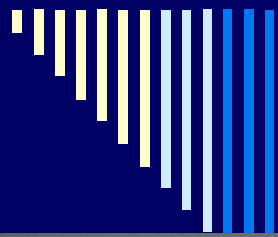
All the time or just
During Sawing and/or
Removal operations?



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President



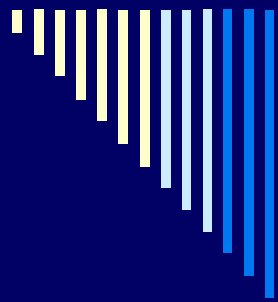
Water Trucks?



March 23, 2004
DOD Transportation
Systems

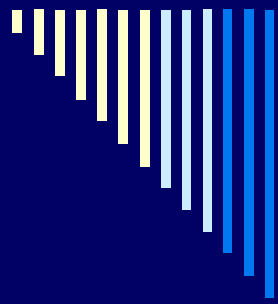
Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President



Summary

- Proper techniques are available to repair & maintain pavements
- The techniques are used to *correct* pavement distresses and *prevent* their occurrence, not cover them up
- Partnering and communication between Owner and Contractor are essential for a successful project during design, pre-bid, precon and during pre-construction.



A thought to leave with you

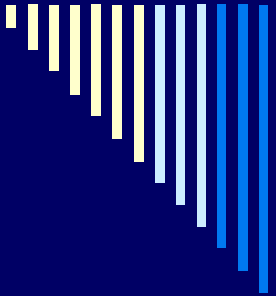
No One Can Predict Or Control The Future

However, The More You Plan
For What You Want To See Happen

The Less Anxious You Are In The Present

And The More The Future Is Known To You

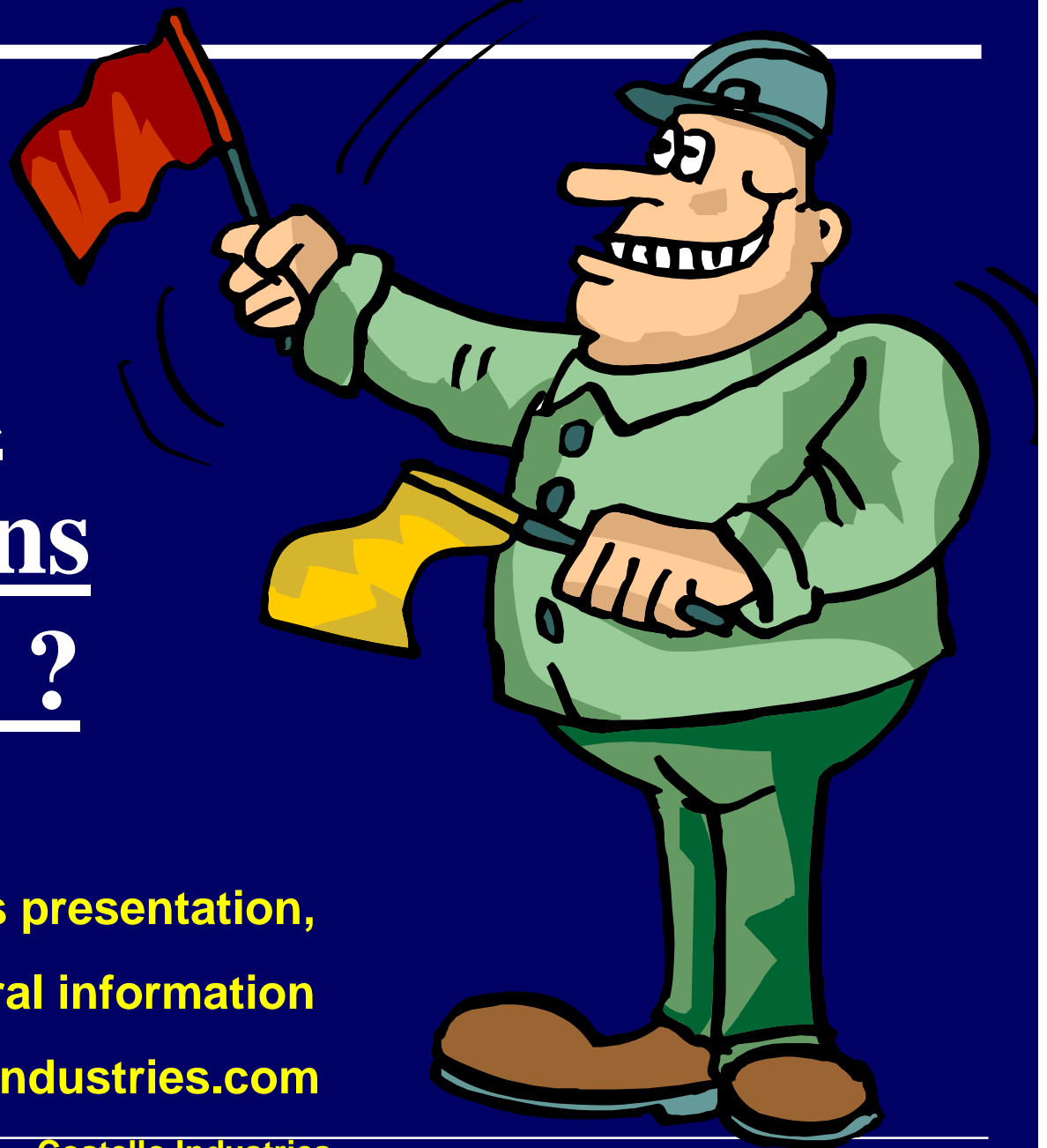
Spencer Johnson



Please have a lot of questions for our panel ?

It makes them feel good!!

**For a copy of this presentation,
pictures or general information
rbrockman@costelloindustries.com**



March 23, 2004
DOD Transportation
Systems

Costello Industries
800-822-2644
www.costelloindustries.com

Frank Costello CEO/President
Rick Brockman SE Div President